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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,299	11/19/2003	Girish Srinivas	144-02	6479

23713 7590 08/22/2005

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EXAMINER

HERTZOG, ARDITH E

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,299

Applicant(s)

SRINIVAS ET AL.

Examiner

Ardith E. Hertzog

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/25/05 & 5/31/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/25/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed January 25, 2005 (hereinafter "the 1/25/05 amendment") and the amendment filed May 31, 2005 (hereinafter "the 5/31/05 amendment"). Claims 1-53, per the 1/25/05 amendment, are pending.
2. The objections to the abstract, as set forth in paragraphs 4. and 6. of the prior Office action with mailing date August 25, 2004 (hereinafter "the 8/25/04 action"), have been **overcome** by the 5/31/05 amendment.
3. The objections to the drawings, as set forth in paragraphs 7.-8. of the 8/25/04 action, have been **overcome** by the 1/25/05 amendment.
4. The objections to the disclosure and specification, as set forth in paragraphs 11. and 12. of the 8/25/04 action, have been **overcome** by the 1/25/05 amendment.
5. The 1/25/05 amendment has **mooted** all issues of improper incorporation by reference, per paragraphs 13.-14. of the 8/25/04 action.
6. The objection to claims 18, 19, 22-26, 30 and 38, as set forth in paragraph 15. of the 8/25/04 action, has been **overcome** by the 1/25/05 amendment, **except** as set forth below.
7. The 35 U.S.C. § 112, first paragraph, rejection of claims 1, 3-13, 30, 31, 36, 37 and 39-53, as set forth in paragraph 17. of the 8/25/04 action, has been **overcome** by the 1/25/05 amendment.

Claim Objections

8. Claim 18 is again objected to, because of improper Markush group language (see MPEP § 2173.05(h) I): at line 2, "the group consisting of" should be inserted after "selected from", **and**, before "mixtures", "or" should be replaced with "and". Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 103

9. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-3 and 5-52 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Srinivas et al. (US 6,099,819) in view of Audeh (US 4,786,483) for the reasons of record; see paragraphs 19.-20. of the 8/25/04 action.

11. Claims 4 and 53 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Srinivas et al. in view of Audeh, as set forth above, and **further** in view of Hass et al. (US 4,088,743) for the reasons of record; see paragraphs 21.-22. of the 8/25/04 action.

Response to Arguments

12. Applicant's arguments filed January 31, 2005 have been fully considered, but they have not been found persuasive. It is first argued that the '819 patent (Srinivas et

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al.) “does not generally teach a combination of low oxidation activity metal oxide with one or more higher oxidation activity catalysts” (remarks accompanying amendment at p. 22, last para.). While it is appreciated that this terminology is not used, this argument cannot be found convincing, given that catalysts comprising metal oxides which **read on** such a combination are clearly taught by—and even exemplified in—the ‘819 patent (see, for example, the specific catalysts discussed in Fig. 10). It is next urged:

The ‘819 patent does not teach or suggest that any of the catalysts disclosed therein function in the presence of mercury and more importantly there is no teaching or suggestion that mercuric sulfide would be formed under the conditions of the methods disclosed and could be removed and condensed with sulfur formed by oxidation of H_2S . In the absence of such a teaching or disclosure, one of ordinary skill in the art would not have been motivated to employ the catalysts of the ‘819 patent to simultaneously remove sulfur and mercury. One of ordinary skill in the art would at most have been motivated to employ the catalysts as described to oxidize H_2S to sulfur and, if mercury were present in the gas stream, to employ other methods known in the art to remove mercury. (remarks accompanying amendment at p. 23, second full para.)

It is appreciated that the presence of mercury is not disclosed in the ‘819 patent; indeed, if it were, then the ‘819 patent would have been applied on its own against the instant claims. However, it is respectfully maintained that, in light of the ‘483 patent (Audeh) disclosure that some natural gas fields yield natural gas containing **both H_2S and** mercury (see col. 1, lines 10-12)—and that removal of both in a single step is desirable (see col. 1, lines 41-44)—one of ordinary skill in the art would have been motivated to treat such gas when having utilized the ‘819 processes to treat natural gas, thereby simultaneously removing sulfur and mercury. Thus, it is respectfully submitted that the artisan would in fact **not** have employed other methods to remove mercury, instead having recognized that the ‘819 catalysts function to remove same; it is respectfully

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maintained that there is no **evidence** of record indicating otherwise, and “arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997)” (see MPEP § 2145 I.). Applicant’s point that the ‘483 patent “teaches that some (notably not all) natural gas streams contain H₂S and mercury” (remarks accompanying amendment at p. 23, third full para.) has been noted, but the ‘819 patent—the **primary** reference in the rejections of record—is already considered to teach the treatment of **any** natural gas stream. Applicant’s discussion of the specific simultaneous H₂S/mercury removal taught by the ‘483 patent has been noted, however this patent has not been relied upon for these teachings *per se* but rather its “Prior Art” section. Applicant’s arguments concerning “the entire teachings of the ‘819 and ‘483 patents” (remarks accompanying amendment, para. bridging pp. 23-24) have also been noted, but, in contrast thereto, the rejections of record are not based on the ‘483 patent **alone**, or upon a combination of the **methods** of these two patents. Again, the ‘819 patent has been relied upon for teaching/having rendered obvious essentially all material limitations of the instant claims, with the exception of the **simultaneous** removal of **mercury with** H₂S, while the ‘483 patent has been relied upon for teaching that such simultaneous removal was desirable in the **treatment of natural gas**—processes at least generally suggested by the ‘819 patent. Accordingly, it is respectfully disagreed that no *prima facie* case of obviousness has been established, as urged by applicant. With respect to the tertiary reference applied against instant claims 4 and 53, i.e., the ‘743 patent (Hass et al.), it is appreciated that there is no teaching or suggestion

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that "the catalysts of the '819 patent function in the presence of mercury..." (remarks accompanying amendment, para. bridging pp. 24-25), as stressed by applicant.

However, it is respectfully disagreed that this patent need teach same, since it has been relied upon simply for teaching that the catalytic treatment of gas streams containing not only H₂S, but **also** hydrogen and/or carbon monoxide was known in the art. That is, the combination of the '819 and '483 patents is **already** considered to have rendered obvious the use of the '819 patent catalysts to simultaneously remove H₂S and mercury from natural gas streams, with the '743 patent establishing that it was known in the art that such streams could **further** contain hydrogen and/or carbon monoxide.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are considered cumulative to or less material than those previously made of record.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

15. **A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.**


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16. Any inquiry concerning this communication or any earlier communications from the examiner should be directed to Ardith E. Hertzog at 571-272-1347. The examiner can normally be reached on Monday through Friday (from about 8:00 a.m. - 4:00 p.m.).

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman, can be reached at 571-272-1358. The central fax number for all communications is now 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. For any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AEH
August 18, 2005


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